

426/335  
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1912  
N° 18,345



A.D. 1911

RECORDED

Date of Application, 14th Aug., 1911—Accepted, 14th Aug., 1912

# COMPLETE SPECIFICATION.

## Method of Preserving Fish and the like.

I, ALEXANDER DANILEVSKY, Emeritus Professor, Academician of Science and Councillor of State, of Saint Petersburg, in the Empire of Russia, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to the preserving of fish and has particular reference to that method which consists in subjecting the flesh of fish to the action of a pickling solution consisting of a mixture of an organic acid and salt.

In accordance with the present invention I provide a pickling solution obtained by adding together acetic acid, ethyl alcohol and kitchen salt in suitable proportions. During the reaction of these substances a considerable quantity of acetic-ethyl-ether is formed and dissolves in the solution. This acetic ester has the property of preventing fermentation and decay of the substances to be preserved and of preventing the albumina of the substances from being detached and carried away with the solution.

I am aware that salt, alcohol and acetic acid have been previously employed in combination with saltpetre and wine for the purpose of preserving cheese but this mixture is not suitable for my process, and the resultant pickling solution is entirely different.

The mixture in accordance with the present invention in respect to the preserving of fish has given excellent results and the flesh of the fish retains its whiteness and flavour.

According to the proposed method the preserving solution may be prepared in the following way:

To 80 parts of 60—90% acetic acid 20 parts of pure 95 *per cent.* ethyl alcohol are added with a small quantity of 0.1 to 0.5 parts of spices. The mixture is digested by heating with cooling afterwards, during several days, and then filtered.

From 1 to 10 *per cent.* of the obtained essence are taken to 100 parts of water and about 10 parts of kitchen salt are dissolved therein or even in the water alone before the addition of the acetic essence. About 5% of sugar, or glycerine instead, may also be added to the mixture.

These quantities may naturally be modified to a small degree for different kinds of fish.

The salt as well as the acid of such a carefully prepared pickling solution will promptly penetrate into the tissue of the flesh of the fish, depositing the myosin thereof and permeating at the same time the entire substance of the flesh with the preserving qualities of the solution.

The impregnation of the fish in this pickling solution is continued generally during several days, in accordance with the size and kind of fish to be preserved, after which the preserved fish may be kept in the pickle without being even hermetically closed, for an indefinite period of time.

With the use of fish preserved according to the above described method, as nourishment, the danger of falling ill of the scurvy is excluded, as together with the salt a certain quantity of organic acid is introduced into the organism.

The product obtained by the described method may be used for immediate consumption, as well as for boiling or roasting.

[Price 8d.]

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*Method of Preserving Fish and the like.*

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The general quantity of materials requisite for the preparation of the pickling solution is less than that required for salting or pickling alone.

The proposed method may be applied also for the preserving of various kinds of shellfish and crayfish as oysters, lobsters *etc.*

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A method of preserving fish, shell fish, crayfish and the like characterised by the application of a pickling solution formed by adding together acetic acid, ethyl alcohol and kitchen salt in suitable proportions. 10

2. A method of preserving fish and the like in accordance with Claim 1 in which 1 to 10% of the acetic acid and alcohol is added to 10% of kitchen salt dissolved in water with the addition of a small quantity of sugar, or glycerine and spices, substantially as described.

Dated this 14th day of August, 1911. 15

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